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THREE NEW SPECIES OF POLYCHAETOUS ANNELIDS IN THE COLLECTIONS OF THE UNITED STATES NATIONAL MUSEUM

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THREE NEW SPECIES OF POLYCHAETOUS ANNELIDS IN THE COLLECTIONS OF THE UNITED STATES NATIONAL MUSEUM

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In the course of the determination of annelids for the United States National Museum, three very interesting new species have come to hand. The first was collected by Dr. A. S. Pearse in Japan; the other two were obtained at Grande Isle, La., by William W. Anderson during a course in marine biology given at that place by Dr. Ellinor H. Behre, of the University of Louisiana, to whom we are indebted for the material.

NEREIS HETEROCIRRATA, new species

FIGURE 1

Two specimens, both lacking posterior ends, collected at Takami, near Chochi, Japan. The most noticeable feature is the peculiar development, relative to the other tentacular cirri, of the anterior ventral one. The two dorsal tentacular cirri extend about to the end of the palp, while the posterior ventral one is very much smaller. The anterior ventral one has an enlarged cirrophore and a much swollen, flask-shaped style, which does not quite reach the end of the basal joint of the palp. (Fig. 1, *a*.) In the preserved material the prostomium is a very little longer than the peristomium, and the tentacles are in contact at their bases. The eyes are large, those of the same side separated by a distance less than their diameter, the anterior pair no farther apart than the posterior. The peristomial width is 2 mm.; the length of the first 30 body somites 25 mm.

The first parapodium (fig. 1, *b*) has bluntly rounded, cylindrical dorsal and ventral lobes with a single setal lobe between them. The ventral and dorsal lobes are dark colored, as if they were glandular in structure. The setal lobe has a sharp-pointed posterior lip into which protrudes the apex of a single acicula. Dorsal and ventral to this acicula is a tuft of setae. The dorsal and the ventral cirri are about equal in length, about twice as long as the parapodial lobes. The ventral one is somewhat the heavier of the two and is attached nearer to the apex of the parapodium.

In the fifteenth parapodium the dorsal and ventral cirri are relatively much smaller and more slender, and the parapodial lobe is heavy and blunt pointed. (Fig. 1, *c*.) The dorsal lobe is now double and the seta tuft arises between the two parts. A single large acicula occurs in each part of the parapodium. In parapodia from the posterior part of the body the dorsal half of the upper parapodial lobe is, relatively to the others, much larger and bears the slender dorsal cirrus near its apex. The ventral cirrus is small and inconspicuous. (Fig. 1, *d*.) In the first parapodium the setae

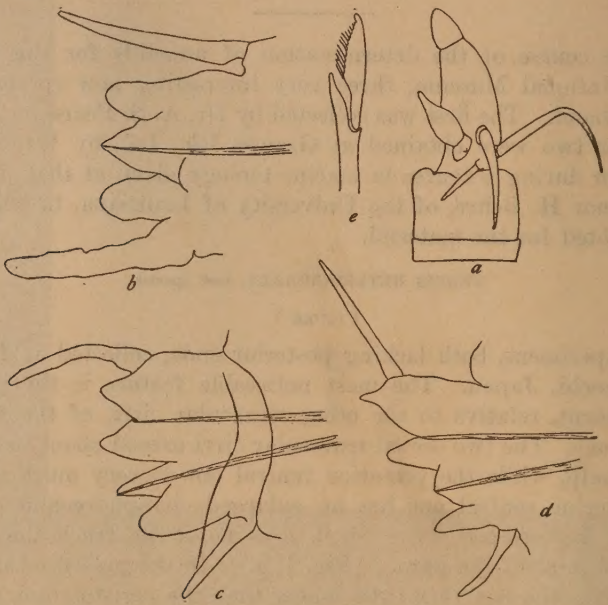

FIGURE 1.—*Nereis heterocirrata*, new species: *a*, Head, × 7.5; *b*, first parapodium, × 18; *c*, fifteenth parapodium, × 36; *d*, posterior parapodium, × 27.5; *e*, seta from first parapodium, × 250

on the ventral part of the seta tuft have short terminal joints that carry long, heavy spines on the inner margins (fig. 1, *e*); those of the dorsal tuft have long and slender terminal joints, and these are finely toothed along one margin. In the posterior portions of the body the seta are badly broken, but so far as it is possible to tell both of the above varieties occur there. In addition are some with much more slender, noticeably "camerated" shafts, the terminal joints flat, elongated triangular in outline, with prominent marginal spines.

Type.—U.S.N.M. No. 19323.

LUMBRINEREIS ELONGATA, new species

FIGURE 2

In one bottle are a number of pieces of *Lumbrinereis*, one carrying the head and another the anal portion, and there are a number of other fragments. It is not possible to tell whether these all belong to the same individual, but they probably do, and in this case it is unusually long for this genus, measuring more than 300 mm. but with a body width of not more than 1 mm. No color appears in the preserved specimen. The prostomium (fig. 2, *a*) is sugar-loaf in outline, a trifle longer than wide, as long as the first three somites. There are two achaetous somites of which the first is a little longer than the second, the constriction between them being indistinct. Together they are about one-third longer than the third somite. The first parapodia are very short, but there is a gradual increase in length in later ones, full size being reached at about the fiftieth somite. Toward the posterior end there is a gradual decrease in the width of the somites but little change in the size of the parapodia. Three blunt, conical cirri and a fragment of a fourth are attached to the anal somite.

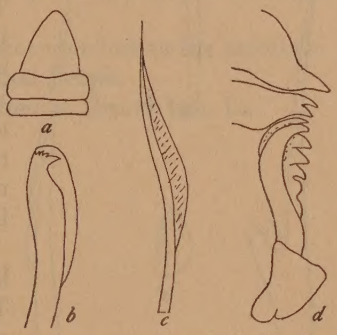

FIGURE 2.—*Lumbrinereis elongata*, new species: *a*, Head, × 10; *b*, hooded seta, × 250; *c*, simple seta, × 250; *d*, part of jaw, × 45

The parapodia have the form usual in this genus, with no notopodium and a prominent postsetal lobe. The two kinds of setae characteristic of *Lumbrinereis* are both present (fig. 2, *b*, *c*), the hooded form being much the more numerous. These have a large subapical tooth with a series of five or six apical ones beyond it. Of these the largest is near the subapical, and the others decrease in size toward the upper part, so that at the very end it is difficult to determine the exact number.

In the jaw (fig. 2, *d*) the forceps have a prominent carrier and a slender terminal portion. The left paired plate has a slender terminal tooth followed by three much heavier ones, and a basal hump that may be the remnant of a tooth. The second paired plate has two teeth, the terminal plate only one. The jaw was badly broken in removing and only the left side is intact, but so far as could be determined the plates are symmetrical on the two sides. All plates are dark brown. The mandible was too badly broken for description.

Holotype.—U.S.N.M. No. 19622, from Grande Isle, La.

EUPOMATUS DECORUS, new species

FIGURE 3

An average-sized specimen has a length of 18 mm. from the collar margin to the end of the pygidium and a width at the collar margin of 1.5 mm. The branchial filaments are about 18 on a side, their length in a well-expanded specimen being 3 mm. The operculum and its stalk are large as compared with the filaments and extend considerably beyond them. In the 11 specimens in the collection, 5 have the operculum on the left side with a small and inconspicuous pseudoperculum on the right. In five others these relations are reversed, and in one there is a fully developed operculum on either side. The radioles are very short at the base of the branchia but soon become longer and at the end have a length four times the diameter of the branchia. There is a smooth tip, as long as the longest radiole, at the end of each branchia. The operculum stalk broadens into a funnel, which carries approximately 40 teeth on its margin. The terminal hooks on the operculum are 12 in number, long, slender, and gently curving to very sharp points.

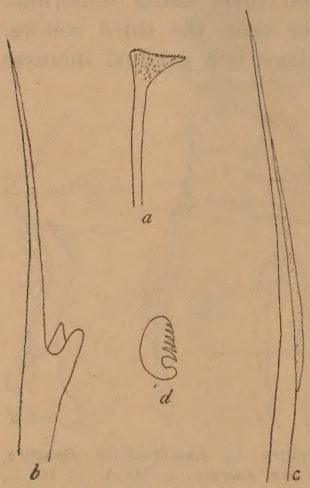

FIGURE 3. — *Eupomatus decorus*, new species: *a*, Dorsal abdominal seta, × 250; *b*, stout seta from first bundle, × 165; *c*, dorsal thoracic seta, × 250; *d*, uncinus, × 250

The branchia arise from a common base, which is about as high as the collar. The collar has four lobes, the dorsal ones at their dorsal ends overlapping the bases of the opercular stalks and separated from one another by a considerable space. A deep depression on each side separates the dorsal from the ventral lobe of the collar, the two latter ones overlapping on the ventral surface and extending farther over the bases of the gills than do the dorsal. The first seta tuft lies in the dorsal collar lobe.

In preserved material the general body color is pale straw, marked as follows with dark-brown pigment: A median stripe in each terminal tooth of the opercular margin; a narrow band on each side of the opercular spine, in some cases spread more diffusely over the base of the spine; a heavy band on the ventral surface, covering each torus of the last six thoracic somites; and a very much narrower band on the ventral margin of each abdominal somite, marking the region of the torus with a minute but still prominent spot at the location of the seta tuft.

At the dorsal end of the setal row in abdominal somites is a tuft of setae, as shown in Figure 3, *a*. Each has a heavy stalk, the inner end terminating bluntly, the outer end asymmetrically widened and concavo-convex in form, its margin denticulated. Fine lines extend down over the stalk from these denticulations. The first seta tuft (which lies in the dorsal collar lobe) contains two rows of setae with six or seven in a row. The first are slender, long, and sharp pointed and lie across the others at an angle of about 45°. The basal part of the second kind is much heavier, having four or five times the diameter of the slender ones. Near the apex their stalk divides into three spines, one of which is long, slender, and sharp-pointed, the other two short and conical. (Fig. 3, *b*.) In the rest of the thoracic somites the dorsal setae are moderately stout, curved, and sharp-pointed and have a fin along the convex margin. (Fig. 3, *c*.) The uncini are similar throughout the body, each (fig. 3, *d*) having a rounded base and six teeth, which decrease gradually in size from the basal to the terminal of the series.

A fragment of the limestone tube remains attached to the holotype. This is heavy and has marked longitudinal ridges.

Holotype.—U.S.N.M. No. 19621, collected at Grand Isle, La.

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